

**Annual Presentation to  
Unisys**

# **Systems Integration**

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*Presented by:* Dennis Wayson, Vice President

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CA 94041-1194  
(415) 961-3300



# Systems Integration Annual Presentation

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## Overview

- Definitions
- Market Forecasts—Commercial/Federal
- Expenditures by Industry
- SI—Driving Forces/Issues

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## Overview

- Project Structure/Composition
- Key Competitors—Commercial/Federal
- 1988 Key Developments
- INPUT's Analysis/Future Trends

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## Unisys

- Competitive Perceptions
- Strengths and Weaknesses
- Leverage Points/Positioning
- Conclusions and Recommendations

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## Sources of Data

- "Buyer Issues" Research Data Base
- SI Project Data Base/Analysis
- 22 In-Depth Vendor Interviews
- INPUT 1988-1993 Market Forecast

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## SI Market Definition

- **Integrated** Solution to a  
Multidisciplinary Information  
Systems Requirement
  - Multiple Vendors
  - Multiyear Schedules
  - Prime Contractor  
Assumes Full Risk

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## Differences Between System Integrators and Turnkey System Vendors

Systems Integrators	Turnkey Systems
Strategic Design & Consulting	Tactical Consulting
Multi-Year Effort	Single Year Time Span
High Level Complexity	Modest Complexity

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## Differences Between System Integrators and Turnkey System Vendors

Systems Integration	Turnkey Systems
SW Development	Software Products
High Cost	Moderate Cost
Large Project Management Skills	

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## Similarities Between System Integrators and Turnkey Systems Vendors

Prime Contractors Role

Multiple Vendors Involved

Equipment Delivery

Software Customization

Installation, Training, and Support

Post-Installation Support

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## Systems Integration Market Forecast 1988-1993

- Federal
- Commercial
- Industry Sectors

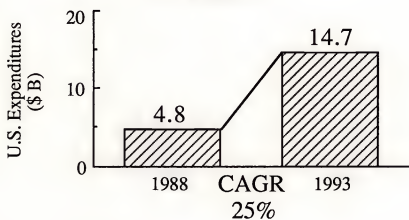
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## Systems Integration Market Forecast



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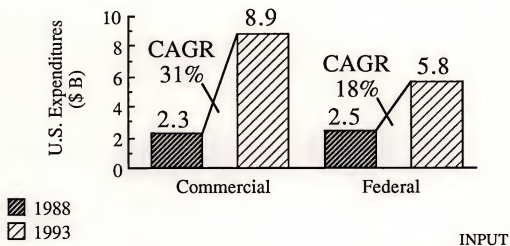
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## Systems Integration Market Forecast



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## Key Factors

### Commercial SI Markets

#### Positive:

- Rising Demand for Connectivity
- Major Rebuilding of Infrastructure
- Growing Trend Toward User Management

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## Key Factors

### Commercial SI Markets

#### Positive:

- Globalization of Competitive Pressure
- Growing Complexity of Applications

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## Key Factors

### Commercial SI Markets

#### Negative:

- "In House" Competitive Threat
- Growing Concerns over Maintenance Issues
- Organizational Instability
- "Wait and See"—Track Records

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## Key Factors

### Federal SI Markets

#### Positive:

- Demand for Productivity Improvement
- Shortage of Technical Staff
- Shared Implementation Risks
- Trend Toward Technology Upgrades

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## Key Factors Federal SI Markets

Negative:

- Deficit and Budget Pressures
- Systems Maintenance Resource Burden
- Slow Standards Implementations
- Extended Implementation Schedules

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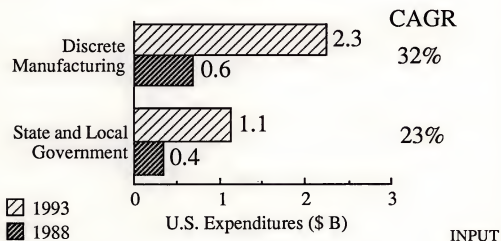
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# Systems Integration Expenditures by Industry 1988-1993



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## Key Factors

### In Discrete Manufacturing Industry

#### Positive:

- Foreign Competition Fosters Automation
- Continuing Capital Equipment Investment
- Larger Sector, Extensive Project Expenditures

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## Key Factors

### In Discrete Manufacturing Industry

#### Positive:

- Communications Network  
Integration Needs
- Response Needed to Inventory  
Controls of Distributors

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## Key Factors

In Discrete Manufacturing Industry

Negative:

- IBM Dominates Hardware Component
- Tendency to Build Rather than Buy
- Some Negative Experience with CSI
- Industry and CSI Experience  
Prerequisite

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## Key Factors

In State and Local Government Market  
Positive:

- Continued Demand for Information Services
- Move Toward In-House Data Processing
- Shortfall of Qualified In-House Staff

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## Key Factors

### In State and Local Government Market

#### Positive:

- Increasing CSI Opportunities with FM Options
- Increasing Network and Resource Sharing Demands

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## Key Factors

### In State and Local Government Market

#### Negative:

- Dispersed Market (82,000 Government Units)
- Emphasis on Local Vendors

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## Key Factors

### In State and Local Government Market

#### Negative:

- Impact of Federal Budget Deficit Controls
- Interest in Small Turnkey Solutions (VARs)

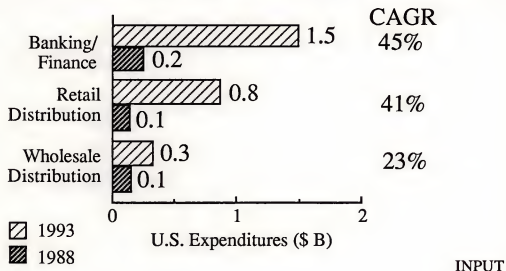
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## Systems Integration Expenditures by Industry, 1988-1993



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## Key Factors

### In Banking/Finance Industry

#### Positive:

- Shift to Merchant Banking
- Time-Sensitive Information Requirements
- Growing Body of PC-Based End Users
- Technical Innovation Desired

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## Key Factors

### In Banking/Finance Industry

Negative:

- Parochial View of In-House Capabilities
- Opportunities Hard to Locate
- Industry and Application Experience Required

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## Key Factors In Banking/Finance Industry

Negative:

- Platform-Based System Preference
- Network Cost Limits

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## Key Factors

### In Retail Distribution Industry

#### Positive:

- Shift to Financial Controls
- Increasing Use of POS and Optical Technology
- Strong Interest in Customer Service
- Network Design and Project Management Needed

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1. The first part of the paper discusses the importance of the study of the history of the United States. It is argued that a knowledge of the past is essential for a full understanding of the present. The author points out that the United States has a long and complex history, and that it is important to understand the events and people that have shaped the nation. The author also discusses the role of the federal government in the development of the country, and the importance of the Constitution. The author concludes that the study of the history of the United States is a vital part of the education of every citizen.

2. The second part of the paper discusses the role of the federal government in the development of the United States. It is argued that the federal government has played a central role in the growth and development of the country. The author points out that the federal government has been responsible for the establishment of the Constitution, the creation of the federal courts, and the development of the federal bureaucracy. The author also discusses the role of the federal government in the development of the economy, and the importance of the federal government in the protection of the rights of citizens. The author concludes that the federal government is a vital part of the United States, and that it is important to understand its role in the development of the country.

## Key Factors

### In Retail Distribution Industry

#### Negative:

- Infrequent User of Outside Services
- Smaller than Average Project Expenditures
- Prevalence of Small Firms
- Low Profit Margins

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## Key Factors

### In Wholesale Distribution Industry

#### Positive:

- Network Requirements
- Potential for EDI Applications
- Strong Interest in Inventory Turnover
- Automation Needed for Survival

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1. The first part of the paper discusses the importance of the study of the history of the United States. It is argued that a knowledge of the past is essential for a full understanding of the present and for the development of a sound policy for the future. The author points out that the study of history is not only a means of acquiring knowledge, but also a means of developing the ability to think critically and to make sound judgments.

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## Key Factors

### In Wholesale Distribution Industry

#### Negative:

- Infrequent User of Outside Services
- Smaller than Average Project Expenditures
- Widely Different Submarkets
- Broad Applications Challenges

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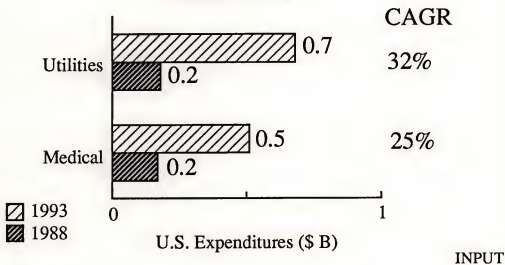
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## Expenditures by Industry 1988-1993



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## Key Factors In Utilities Industry

### Positive:

- Increasing Competitive Use of Technology
- Hardware/Software Obsolescence
- Automation of Repetitive Tasks
- Automated Remote Control Applications

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## Key Factors In Utilities Industry

### Negative:

- Day-to-Day Orientation of IS
- Limited Number of Establishments
- Financial Constraints
- Modular, Rather than Total, View of System

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## Key Factors In Medical Industry

### Positive:

- Pressure to Constrain Medical Services Costs
- Defensive Medicine Requirement for More Data
- Hardware Operating at Capacity
- High Use of Outside Contractors

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## Key Factors In Medical Industry

Negative:

- Turnkey Systems Vendors Very Active
- Industry Experience and Acceptance Required
- Limited Number of Large Clients
- "Bottom-Line" Financial Limitations
- Fragmented Marketplace

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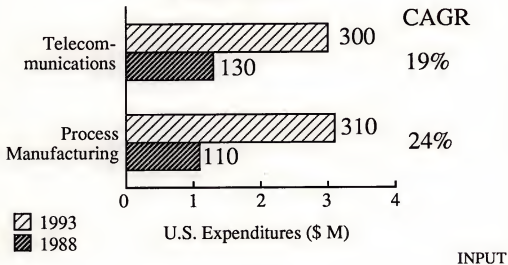
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## Expenditures by Industry 1988-1993



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## Key Factors

### In Telecommunications Industry

#### Positive:

- Internal Lack of Project Discipline
- Network Integration Opportunities
- Widening Range of Services  
Requiring Support
- Need for EDI and AI-Based Systems

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## Key Factors In Telecommunications Industry

### Negative

- Industry Restructuring Delays Projects
- Perceived In-House Technical Skills
- Highly Unionized Work Force
- Foreign Vendor Interests

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## Key Factors

### In Process Manufacturing Industry

Positive:

- Competitive Need to Meet Market Demands
- Need to Improve Operating Efficiencies

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## Key Factors

### In Process Manufacturing Industry

Positive:

- Network Design/Integration Requirements
- Need Support for Marketing and Strategic Planning

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## Key Factors

### In Process Manufacturing Industry

#### Negative:

- Few Large Establishments
- Reluctance to Contract for Services
- Process Concentrated in Operations

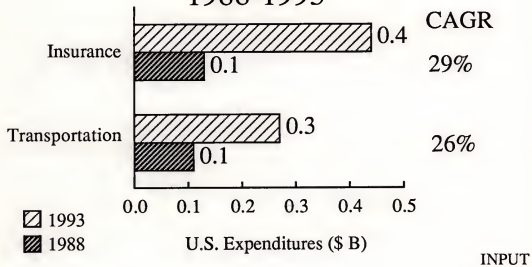
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## Expenditures by Industry 1988-1993



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## Key Factors In Insurance Industry

Positive:

- Replace Aging Data Processing Resources
- New Products (Insurance and Financial) Require Support

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## Key Factors In Insurance Industry

Positive:

- Need for On-Line Policyholder/  
Client Information
- Integrated Network Requirements
- Need On-Line Multifunction Systems

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## Key Factors In Insurance Industry

Negative:

- Cost Controls Limit New Starts
- Ongoing Industry Restructuring
- Industry-Specific Knowledge/  
Experience
- Self-Sufficiency Mentality

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1. The first of the year was a very cold day, with a heavy frost, and the wind from the north-east.

2. The second day was a fine day, with a clear sky and a gentle breeze from the south.

3. The third day was a very warm day, with a clear sky and a gentle breeze from the south.

4. The fourth day was a very cold day, with a heavy frost, and the wind from the north-east.

5. The fifth day was a fine day, with a clear sky and a gentle breeze from the south.

6. The sixth day was a very warm day, with a clear sky and a gentle breeze from the south.

7. The seventh day was a very cold day, with a heavy frost, and the wind from the north-east.

8. The eighth day was a fine day, with a clear sky and a gentle breeze from the south.

9. The ninth day was a very warm day, with a clear sky and a gentle breeze from the south.

10. The tenth day was a very cold day, with a heavy frost, and the wind from the north-east.

11. The eleventh day was a fine day, with a clear sky and a gentle breeze from the south.

12. The twelfth day was a very warm day, with a clear sky and a gentle breeze from the south.

13. The thirteenth day was a very cold day, with a heavy frost, and the wind from the north-east.

14. The fourteenth day was a fine day, with a clear sky and a gentle breeze from the south.

15. The fifteenth day was a very warm day, with a clear sky and a gentle breeze from the south.

16. The sixteenth day was a very cold day, with a heavy frost, and the wind from the north-east.

17. The seventeenth day was a fine day, with a clear sky and a gentle breeze from the south.

18. The eighteenth day was a very warm day, with a clear sky and a gentle breeze from the south.

19. The nineteenth day was a very cold day, with a heavy frost, and the wind from the north-east.

20. The twentieth day was a fine day, with a clear sky and a gentle breeze from the south.

21. The twenty-first day was a very warm day, with a clear sky and a gentle breeze from the south.

22. The twenty-second day was a very cold day, with a heavy frost, and the wind from the north-east.

23. The twenty-third day was a fine day, with a clear sky and a gentle breeze from the south.

24. The twenty-fourth day was a very warm day, with a clear sky and a gentle breeze from the south.

25. The twenty-fifth day was a very cold day, with a heavy frost, and the wind from the north-east.

26. The twenty-sixth day was a fine day, with a clear sky and a gentle breeze from the south.

27. The twenty-seventh day was a very warm day, with a clear sky and a gentle breeze from the south.

28. The twenty-eighth day was a very cold day, with a heavy frost, and the wind from the north-east.

29. The twenty-ninth day was a fine day, with a clear sky and a gentle breeze from the south.

30. The thirtieth day was a very warm day, with a clear sky and a gentle breeze from the south.

31. The thirty-first day was a very cold day, with a heavy frost, and the wind from the north-east.

## Key Factors In Transportation Industry

Positive:

- Competition and Changing Rates  
Require Support
- Strong Need for End-to-End Systems

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## Key Factors In Transportation Industry

Positive:

- Network Design/Integration Requirements
- Move to Independent Traffic Management

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## Key Factors In Transportation Industry

### Negative:

- Few Opportunities Outside of Airline Segment
- Little Growth in IS Expenditures
- Limited Use of Outside Services
- Limited Capital Investment Availability

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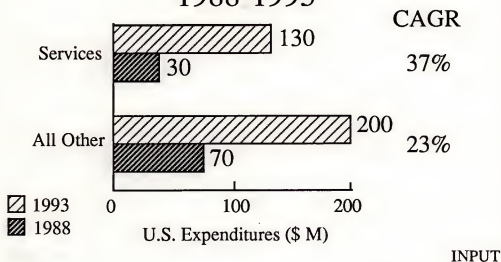
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# Systems Integration Expenditures by Industry 1988-1993



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## Key Factors In Services Industry

### Positive:

- New Demands for Networks and Data Bases
- Key Service Sectors Are Organizing Support Systems
- Recreation Market Creating New Systems Demands

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## Key Factors

### In Services Industry

#### Negative:

- Few Large Enterprises
- Minimal Use of Automation
- Few Large-Scale Opportunities
- In-House Control of Large Client Systems

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1. The first part of the paper discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business and for the protection of the interests of all parties involved. The author argues that without accurate records, it is impossible to make informed decisions or to identify areas for improvement.

2. The second part of the paper focuses on the importance of communication. It stresses that effective communication is key to building strong relationships with customers, suppliers, and other stakeholders. The author provides several tips for improving communication, such as listening actively, being clear and concise, and using appropriate channels for different types of communication.

3. The third part of the paper discusses the importance of innovation. It argues that in a rapidly changing business environment, companies must be able to innovate in order to stay competitive. The author provides several examples of successful companies that have achieved this through innovation, and offers advice on how other companies can do the same.

4. The fourth part of the paper discusses the importance of financial management. It stresses that proper financial management is essential for the long-term success of any business. The author provides several tips for managing finances effectively, such as creating a budget, monitoring expenses, and seeking professional advice when needed.

5. The fifth part of the paper discusses the importance of human resources. It argues that a company's success is ultimately determined by the quality of its workforce. The author provides several tips for managing human resources effectively, such as recruiting and hiring the right people, providing training and development opportunities, and creating a positive work environment.

6. The sixth part of the paper discusses the importance of marketing. It stresses that effective marketing is essential for reaching target audiences and driving sales. The author provides several tips for developing a successful marketing strategy, such as identifying target markets, choosing the right marketing channels, and measuring the results of marketing efforts.

## SI—Driving Forces and Issues

- Major Issues—1988/Buyers
- Major Issues—1988/Vendors
- Technology Drivers—1988

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## Major Buyers Issues—1988

- Rising Management Expectations
- User Demands for Increasingly Complex Solutions
- Managing the Technology Investment
- Integration—Data/Applications/Technology
- "Mission Critical" Solutions

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## Major Issues—1988

### Vendors

- Potential of Catastrophic Failure
- Resistance from In-House Integrators
- Increasing Competition—Confusion
- Competitive Exposure through Specific Project Alliances
- Leading-Edge Technology Risks

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1. The first part of the paper discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business and for the protection of the interests of all parties involved. The author notes that many businesses fail because they do not keep adequate records, leading to confusion and disputes.

2. The second part of the paper describes the various methods used to collect and analyze data. It includes a detailed discussion of the different types of data that can be collected, such as primary and secondary data, and the various techniques used to analyze this data. The author also discusses the importance of ensuring the accuracy and reliability of the data collected.

3. The third part of the paper discusses the various methods used to collect and analyze data. It includes a detailed discussion of the different types of data that can be collected, such as primary and secondary data, and the various techniques used to analyze this data. The author also discusses the importance of ensuring the accuracy and reliability of the data collected.

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## Technology Drivers—1988

- Relational Data Structures
- Open Systems Standards
- Multiplatform Software
- Microcomputer Sophistication
- Communications Product Range

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## Project Structure and Composition

- SI Project Data Base 1987-1988
- Distribution and Component Analysis  
Federal and Commercial
- SI Project Classifications
- Trends in SI Project Composition

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## SI Project Data Base, 1987-1988

	Commercial	Federal
Projects Analyzed		
Completed	93	35
In Progress	133	56
"Suspects" Resolved and Not Used	115	-
Total	341	91

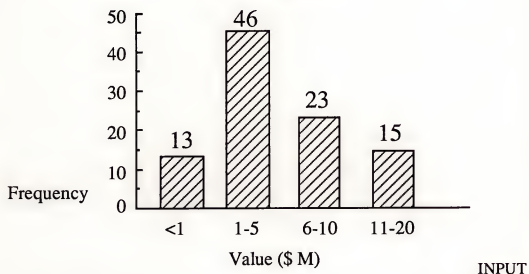
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## Distribution of Commercial Projects by Value

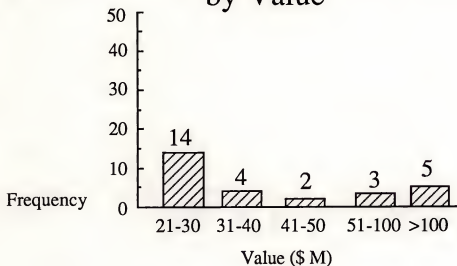


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## Distribution of Commercial Projects by Value



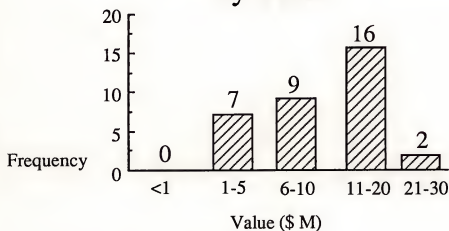
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## Distribution of Federal Projects by Value



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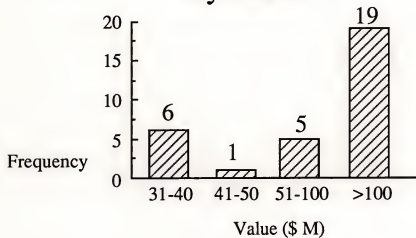
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## Distribution of Federal Projects by Value



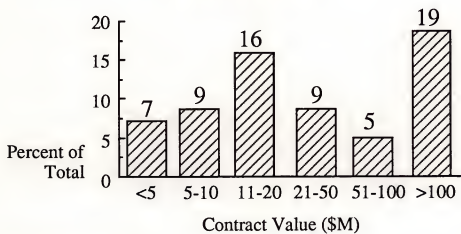
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## Distribution of Projects by Value Federal Sector



No. Projects = 65

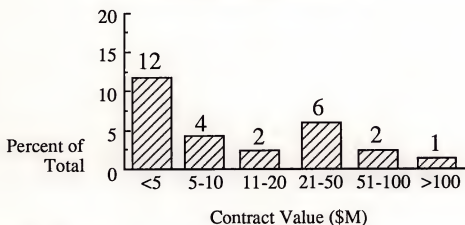
INPUT

NOTES:

SIOS-41a



## Distribution of Projects by Value State and Local Sector



No. Projects = 27

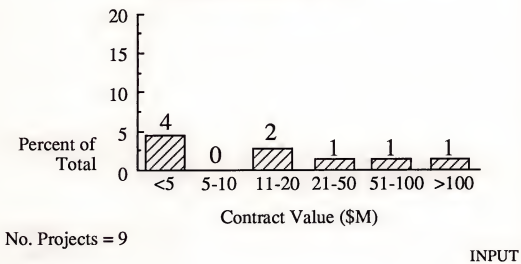
INPUT

NOTES:

SIOS-41b



## Distribution of Projects by Value Transportation Sector



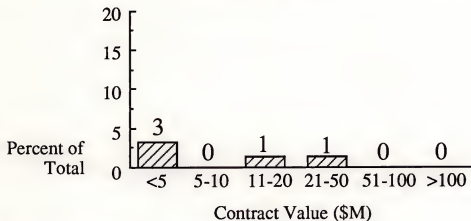
NOTES:

SIOS-41c





## Distribution of Projects by Value Utilities Sector



No. Projects = 5

INPUT

NOTES:

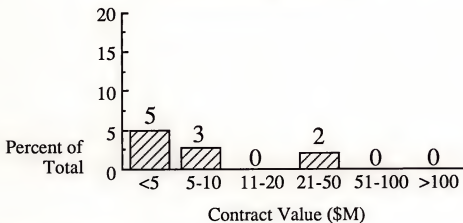
SIOS-41d

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## Distribution of Projects by Value

Discrete Mfg. Sector



No. Projects = 10

INPUT

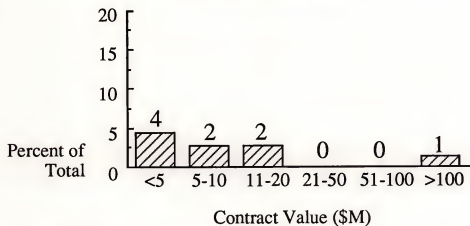
NOTES:

SIOS-41e



## Distribution of Projects by Value

### Distribution Sector



No. Projects = 9

INPUT

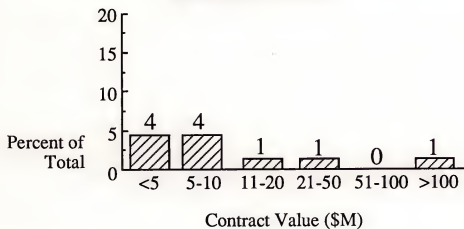
NOTES:

SIOS-41f



## Distribution of Projects by Value

### Insurance Sector



No. Projects = 11

INPUT

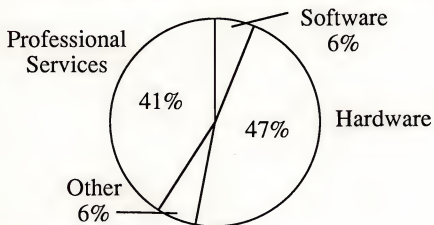
NOTES:

SIOS-41g





## Expenditures by Component Group Federal Project Sample



N=56 Projects

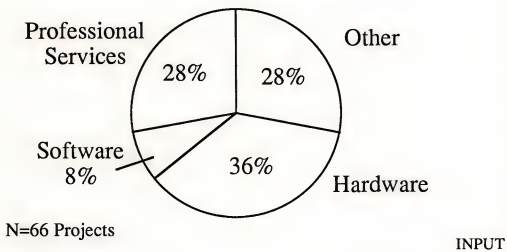
INPUT

NOTES:

SIOS-42



## Expenditures by Component Group Commercial Project Sample



NOTES:

SIOS-44



## SI Project Classifications

### Applications Level

- Focused on Specific Business Solution
- Driven by Executive/User Management
- Short-Term Payout with High Visibility

INPUT

NOTES:

SIOS-45a



## SI Project Classifications

### Data Level

- Focused on Providing Data Infrastructure
- Driven by IS or Division Management
- Provides Platform for "Suites" of Applications

INPUT

NOTES:

SIOS-45b





## SI Project Classifications

### Network Level

- Focused on Total Delivery Capability
- Almost Universally IS Driven
- Provides Standard Environment/Tools

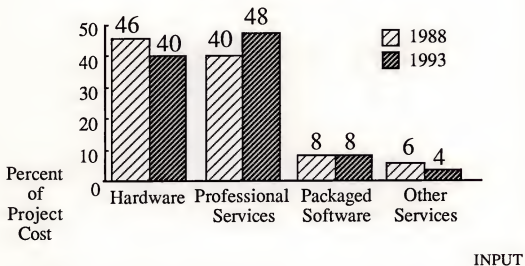
INPUT

NOTES:

SIOS-45c



## Trends in SI Project Composition



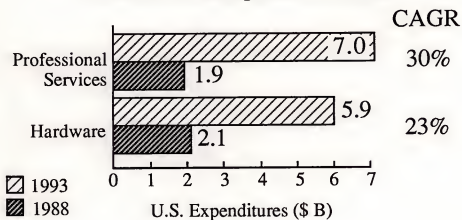
NOTES:

SIOS-46



# Systems Integration Market

1988-1993 Component Groups



INPUT

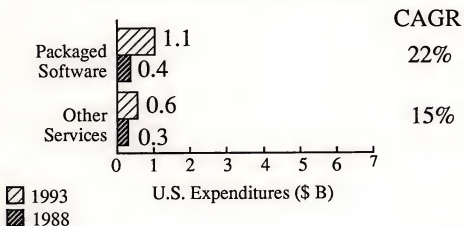
NOTES:

SIOS-47a



# Systems Integration Market

1988-1993 Component Groups



INPUT

NOTES:

SIOS-47b





## Key Competitors— Commercial/Federal

- Leading SI Vendors and Market Share
- Leading Vendors—An Overview
- SI Vendor Profiles
- Emerging Vendor Trends

INPUT

NOTES:

SIOS-48



## Leading Systems Integration Vendors, Market Shares, 1987

Vendor	U.S. Revenues (\$M)	Market Share (%)
IBM	515	14
EDS	450	12
Andersen Consulting	420	11
Boeing	250	7

INPUT

NOTES:

SIOS-49a



## Leading Systems Integration Vendors, Market Shares, 1987

Vendor	U.S. Revenues (\$M)	Market Share (%)
CSC	195	5
SAIC	175	5
Grumman	150	4
CDC	130	3

INPUT

NOTES:

SIOS-49b



## Leading Systems Integration Vendors, Market Shares, 1987

Vendor	U.S. Revenues (\$M)	Market Share (%)
SHL Systemshouse	115	3
Unisys	100	3
AGS (Nynex)	75	2
		58

INPUT

NOTES:

SIOS-49c





## Vendor Profiles: Andersen Consulting

- Business Duration
  - 10 Years
- Organization
  - Decentralized, Vertical Market Implementation Staff
- Dedicated Resources
  - 15,000 (Worldwide) Employees in Systems Integration and Professional Services

INPUT

NOTES:

SIOS-54.01ab



## Vendor Profiles: Andersen Consulting

- Target Industries
  - Aerospace
  - Manufacturing
  - Utilities
  - Distribution
  - Finance

INPUT

NOTES:

SIOS-54.02



## Vendor Profiles: Andersen Consulting Strengths

- Consulting Expertise, Depth of Staff
- Systems/Product Demonstration Centers
- High-Level Client Contacts

INPUT

NOTES:

SIOS-54.03a

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## Vendor Profiles: Andersen Consulting Strengths

- Growing Reputation as SI Providers
- Reorganization to Focus on Professional Services and SI
- Software Development Methodology

INPUT

NOTES:

SIOS-54.03b





**Vendor Profiles:**  
**Andersen Consulting**  
Weaknesses

- Possible Cash Constraints
- Perception as Accounting Firm
- Network Management Skills

INPUT

NOTES:

SIOS-54.04



## Vendor Profiles: Andersen Consulting

### SI Strategies

- Strong Promotional/Marketing Thrust
- Reorganization for Consulting Focus
- Demonstration Systems/Centers  
(Vertical Markets)

INPUT

NOTES:

SIOS-54.05a



## Vendor Profiles: Andersen Consulting SI Strategies

- Continuing Employee Education
- Focus on Largest Accounts
- Leverage "Complete Solution" Capabilities

INPUT

NOTES:

SIOS-54.05b



## Vendor Profiles: DEC

- Business Duration
  - 10 Years
- Organization
  - Centralized Marketing and Promotion
  - Decentralized Execution
- Dedicated Resources
  - Approximately 300

INPUT

NOTES:

SIOS-54.06





## Vendor Profiles: DEC

- Target Industries
  - Manufacturing
  - Telecommunications
  - Education
  - Aerospace
  - Banking & Finance
  - Health Care
- Unique Capabilities
  - Applications Support Centers
  - Connectivity Products

INPUT

NOTES:

SIOS-54.07ab



## Vendor Profiles: DEC

### Strengths

- Integrated Architecture
- Networking Capabilities
- Active Users Group
- Third-Party Software
- Alliances (CIM Especially)

INPUT

NOTES:

SIOS-54.08



## Vendor Profiles: DEC

### Weaknesses

- Lack of Micro & Mainframe Capability
- Modest SI Presence
- Changing Distribution Channels
- Organization for SI

INPUT

NOTES:

SIOS-54.09



## Vendor Profiles: DEC

- Sample Projects
  - Firestone—CIM, \$21M
  - W. Transportation—Inventory, \$6M
  - Bantam Doubleday—Network Int., \$3M

INPUT

NOTES:

SIOS-54.10





## Vendor Profiles: DEC

- 150 Projects in 1987/88 Time Frame
- Average Size: Small \$1-5M
- Hiring Heavily from Big 8

INPUT

NOTES:

SIOS-54.11a



## Vendor Profiles: DEC

- Leveraging Network Capabilities
- Missing Project/Development Methodology
- Targeting "Enterprise" Contracts

INPUT

NOTES:

SIOS-54.11b



## Vendor Profiles: Computer Sciences

- Business Duration
  - 21 Years
- Organization
  - Centralized Marketing and Promotion
  - Decentralized Contract Review/  
Approval, Project Management
- Dedicated Resources
  - 2,500

INPUT

NOTES:

SIOS-54.12



## Vendor Profiles: Computer Sciences

- Target Industries
  - Government
  - Distribution
  - Finance
  - Insurance
  - Telecom Providers
  - Retail
  - Publishing
  - Manufacturing

INPUT

NOTES:

SIOS-54.13ab





## Vendor Profiles: Computer Sciences

- Target Functions
  - Networking
  - Office Automation
  - Digital Image Handling
  - Facility Management
  - Logistics

INPUT

NOTES:

SIOS-54.14



## Vendor Profiles: Computer Sciences Strengths

- Full-Service Provider
- Depth/Diversity of Staff
- Hardware-Independent Vendor
- Reputation for Performance
- Networking

INPUT

NOTES:

SIOS-54.15



## Vendor Profiles: Computer Sciences

### Weaknesses

- Small (Relative) Commercial Sector Presence
- Focused on Narrow Markets, in Terms of Current Results

INPUT

NOTES:

SIOS-54.16



## Vendor Profiles: Computer Sciences

### Typical Projects

- Dade County Airport: Cargo Information System
- German Bundesbahn: EDI for Railway System
- USAF Stock Control and Distribution
- Cincinnati Gas & Electric: On-line Customer Services System

INPUT

NOTES:

SIOS-54.17a





## Vendor Profiles: Computer Sciences

### Typical Projects

- AT&T Trunk Inventory and Control
- Kennedy Space Center: Office Automation
- U.S. Treasury Dept.: Consolidated Data Network

INPUT

NOTES:

SIOS-54.17b



## Vendor Profiles: IBM

- Business Duration
  - 5+ Years in SI
- Organization
  - Centralized Account Management and Sales
  - Decentralized Contract Approval, Project Control

INPUT

NOTES:

SIOS-54.18a



## Vendor Profiles: IBM

- Dedicated Resources
  - 6,000-8,000 People in Systems Integration Division (SID)

INPUT

NOTES:

SIOS-54.18b



## Vendor Profiles: IBM

### Strengths

- Market Presence
- Installed Base
- Resource Access
- Long-Term Account Relationships

INPUT

NOTES:

SIOS-54.19a





## Vendor Profiles: IBM

### Strengths

- Full Equipment Range
- Third-Party Suppliers
- Subcontractor Relationships
- Education, Training, Documentation
- Vertical Market Expertise

INPUT

NOTES:

SIOS-54.19b



## Vendor Profiles: IBM

### Weaknesses

- Internal Bureaucracy
- Speed of Response
- Product Orientation
- Nonintegrated Products
- Project Management Methodologies and Skills
- Pricing: Low Flexibility

INPUT

NOTES:

SIOS-54.20ab



## Vendor Profiles: IBM

### SI Strategies

- Stress Advanced Functions: AI, Image Processing, Networking, Connectivity
- Massive Reorganization into SID
- Emphasize Software and Connectivity
- Third-Party SW Leverage  
(2500 Programs on AS/400)
- Decentralized Decision Making

INPUT

NOTES:

SIOS-54.21ab



## Vendor Profiles: IBM

- Over 200 Contracts (Federal and Commercial)
- Average Commercial Value: \$6-7M
- Commercial Range: \$50K-400M

INPUT

NOTES:

SIOS-54.22a





## Vendor Profiles: IBM

### Typical Projects

- Ford Motor Company, Office Systems (\$400M)
- FAA: Advanced System
  - Westpac—4th-Generation Banking Systems
  - Amadeus—European Consortium Airline Reservations System

INPUT

NOTES:

SIOS-54.22b



## Vendor Profiles: IBM

### Typical Projects

- USAA: IMAGE/Folder Management (Insurance)
- Ford: CIM, Truck Plant
- United Airlines: Joint \$250M Project for Travel Agents Suspended

INPUT

NOTES:

SIOS-54.22c



## Vendor Profiles: SAIC

- Business Duration
  - 15 Years
- Organization
  - Entirely Decentralized to Divisions
- Dedicated Resources
  - 150 Commercial, 1500 Federal

INPUT

NOTES:

SIOS-54.23



## Vendor Profiles: SAIC

### Strengths

- Simulation Capabilities

INPUT

NOTES:

SIOS-54.24





## Vendor Profiles: SAIC

### Weaknesses

- Fragmented Divisional Approach
- Primarily Federal Concentration

INPUT

NOTES:

SIOS-54.25

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## Vendor Profiles: SAIC

### Typical Projects

- DoD: Automated Medical Treatment Facilities
- FBI: Automated Fingerprint System
- DoE: Financing Support System
- Middle East: C3 Systems
- USAF: Logistics Center,  
Sacramento

INPUT

NOTES:

SIOS-54.26ab



## Vendor Profiles: EDS

- Organization
  - No Dedicated Structure
- Dedicated Resources
  - Unknown (Estimate 100 People)

INPUT

NOTES:

SIOS-55a



## Vendor Profiles: EDS

- Strengths
  - Understand Vertical Targets
  - Technical Skills/Communications
- Weaknesses
  - Image/Limited Alliances

INPUT

NOTES:

SIOS-55b





## Vendor Profiles: EDS

- Primary Motivation to Drive FM
- Limited in Alliances
- Potentially Hindered by GM Relationship

INPUT

NOTES:

SIOS-56a



## Vendor Profiles: EDS

- Extensive Large Project Management Experience
- Typical Project Size \$5-30M
- About 50 Projects 1987-88

INPUT

NOTES:

SIOS-56b



## Vendor Profiles: EDS

- Target Industries
  - Manufacturing
  - Banking/Finance
  - Health Care
  - Telecommunications
  - Distribution
  - State & Local Government
- Unique Capabilities
  - Proven FM Record
  - Network Management

INPUT

NOTES:

SIOS-57ab



## Vendor Profiles: EDS

- Sample Projects
  - K-Mart Corporation—POS, \$20M
  - Best Products—Retail/POS, \$25M
  - RVS Insurance—Comprehensive

INPUT

NOTES:

SIOS-58





## 1988 Key Developments

- DEC Formalizes SI Strategy  
Enterprise Services
- IBM Organizes to Address SI Market
- ORACLE Forms Federally Oriented  
SI Division

INPUT

NOTES:

SIOS-59



## 1988 Key Developments

- NYNEX Buys AGS
- EDS Faces SI Project Difficulties
- Formation of Andersen Consulting Division
- AA Defections to Saatchi & Saatchi—ICS

INPUT

NOTES:

SIOS-60



## Future Trends

- New Competitors Will Enter Market

Large, Small & Niche

- Market "Hype" Will Blur Definitions
- Increased Centralization of SI  
"Product" Management within Vendors
- Increased Development of Proprietary  
Technologies/Methodologies

INPUT

NOTES:

SIOS-61ab



## Future Trends

- Growing Investment in Marketing/  
Promotion
- Entrance of Off-Shore Competitors  
in U.S. Market
- Telecommunications Companies

INPUT

NOTES:

SIOS-62a





## Future Trends

- Non-SI Vendors Will Develop Formal Strategies for Market Participation as Subcontractors

Apple

- Number of Acquisitions Will Grow

INPUT

NOTES:

SIOS-62b



## Emerging Vendor Trends by Class

Vendor Class	Additional Capabilities	Strategic Target
Professional Services	Data/ Network	Vertical Industry Niches
Software	Prof. Services (PS)	Applications Niches

INPUT

NOTES:

SIOS-63a



## Emerging Vendor Trends by Class

Vendor Class	Additional Capabilities	Strategic Target
Hardware	Software/PS	Full Range
Communications	Software/PS	Network
Systems Suppliers	Data/Network	Applications/Network

INPUT

NOTES:

SIOS-63b



## Systems Integration Recommendations

- Present Full-Service Image
- Leverage/Promote  
Proprietary Technology
- Establish Strategic Partnerships  
(Alliances)
- Initiate and Maintain Overall  
Account Control
- Maintain Project Management  
Continuity

INPUT

NOTES:

SIOS-64ab

